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ABSTRACT

A survey was conducted to obtain information on the progress and degree attainment of minority students in colleges and universities. Between July 1973 and June 1974, 7.8 percent of the baccalaureates from 1,704 schools in the U.S. were awarded to minority students (Blacks, Spanish-surnamed Americans, Asian-Americans, and American Indians). Patterns of graduation from private versus public institutions, and colleges versus universities, were apparent. Nearly half the Black students graduated from Black institutions. Regional variations, sex differences, and field of study variations were apparent in the results. Some data are presented in tabular form, and appendices include the survey instrument, data on survey response rates, statistical methods, a comparison with HEGIS data, and an assessment of the survey's data quality. (Author/MSE)

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Bachelor's Degrees Awarded to Minority Students 1973-74

Frank J. Atelsek and Irene L. Gomberg

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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AMERICAN COUNCIL ON EDUCATION

Roger W. Heyns, *President*

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BACHELOR'S DEGREES AWARDED TO MINORITY STUDENTS 1973-74

Frank J. Atelsek
Irene L. Gomberg

Higher Education Panel Reports
Number 24 January 1977

American Council on Education
Washington, D. C.

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Many other individuals gave their time and talents to this project, notably Dr. John Creager, Martin Ozga, and Laura Kent of ACE; Dr. Charles Sherman, formerly with the National Board on Graduate Education; and Julian Smith of Howard University.

Dr. Paula Knepper and Nabil Issa were responsible for processing the data, Gloria Robbins did much of the survey follow-up, and Elaine Chamberlain typed draft after draft of the report.

Again we wish to thank the Panel representatives and their colleagues at the responding institutions for providing the information and assessing its quality.

Highlights

National Data

- Between July 1973 and June 1974. 7.8 percent of the baccalaureates from 1,704 universities and colleges in the United States were awarded to minority-group members. These recipients included Black Americans (5.3 percent), Spanish-surnamed Americans (1.3 percent), Asian-Americans (.9 percent), and American Indians (.3 percent).

- Proportionally, fewer than half as many Black students as all baccalaureate-recipients graduated from public universities (12 percent vs. 28 percent); more than half (52 percent) the Black students received their B.A. from public four-year colleges, compared with 40 percent of all baccalaureate-recipients.

- Similarly, Spanish-surnamed Americans receiving the B.A. were somewhat underrepresented at public universities (17 percent vs. 28 percent of all baccalaureate-recipients) and overrepresented at private universities (17 percent vs. 8 percent).

- While the proportions of Asian-Americans and American Indians who received the B.A. from public and private universities were similar to the proportions of all recipients, these minority students were much less likely than the typical graduate to have earned their degrees from private than from public four-year colleges.

- Nearly half (45 percent) of the Black students who received the baccalaureate graduated from predominantly Black institutions.

- Blacks who received their bachelor's degrees from predominantly White institutions represented 3 percent of the total baccalaureate-recipients at those institutions.

Regional Variations

- In the East and North Central states, only 4 percent of the baccalaureates went to minority students; in the South and the West, the figures were 13 percent and 10 percent respectively.

- In the South, four of every five degrees awarded to minorities were conferred upon Black students; in the West, Asian and Spanish-surnamed Americans accounted for more than two-thirds of the minority students receiving baccalaureates.

Sex Distribution

- While men accounted for 55 percent of all baccalaureates, they represented 43 percent of the Black graduates and 63 percent of the American Indian graduates.

- Among all graduates, 35 percent received their baccalaureate degrees from universities; the comparable figures for all minority women and all minority men were 22 percent and 28 percent, respectively.

Field of Study

- Overall, Black graduates earned 5 percent of the baccalaureates awarded but an above-average proportion of the degrees granted in social work (14 percent), education (8 percent), and the social sciences (7 percent). The representation of Black graduates was lower than average in the physical sciences (3 percent), architecture and environmental design (2 percent), and engineering (2 percent).

- Compared with their proportion among all baccalaureate-recipients (.9 percent), Asian-Americans were somewhat overrepresented in social work, the health professions, the biological sciences, and mathematics (2 percent each), but underrepresented in the field of education (less than .5 percent).

Respondent Assessment of Data Quality

- 40 percent of the respondents to this survey relied on departmental or other institutional records to obtain the requested data on minority-group membership; 32 percent relied on self-designations previously given by students.

- On a five-point scale indicating certainty about the data reported, 85 percent of the respondents marked one of the two highest ratings, and 6 percent marked one of the two lowest. Almost three in four of the smaller colleges, but only one in five of the larger institutions, were "very certain" about their data.

- Most of the uncertainty (32 percent) resulted from reliance upon student self-designations of race.

Background

In recent years the flow of minority students through colleges and universities has become an issue of growing concern. Two national surveys have provided data on the post-secondary enrollment patterns of minority students,[1,2] but information on the subsequent progress and degree attainment of these students has been lacking. Previous estimates have been based solely on enrollment patterns.

Several organizations--specifically the National Board on Graduate Education, the Institute for the Study of Educational Policy at Howard University, and the Institute for Services to Education--urged the American Council on Education to undertake a survey collecting information on minority baccalaureate production. These organizations agreed to carry out supplementary surveys to assure that institutions known to account for a substantial part of the undergraduate education of minority students (notably the historically Black colleges and those institutions in the Southwest which enroll large numbers of Hispanic students) would be fully represented. The Council agreed to conduct the survey through its Higher Education Panel, recognizing that the findings would provide a framework for assessing equal education opportunity. One vital factor in such an assessment is adequate information on the baccalaureate completion rates of minority students and on their fields of study, information that would also provide a base for determining the potential availability of minority students for graduate and professional training as well as in the labor market.

We hope that this first effort at a national estimate of minority baccalaureate production will be useful in meeting these ends.

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[1]Office for Civil Rights, Department of Health, Education and Welfare. Racial and Ethnic Enrollment Data From Institutions of Higher Education, Fall 1972, OCR-74-13. Washington: U.S. Government Printing Office, 1974.

[2]El-Khawas, Elaine H., and Kinzer, Joan L., Enrollment of Minority Graduate Students at Ph.D.-Granting Institutions, Higher Education Panel Report, No. 19. Washington: American Council on Education, 1974.

Methods Summary

The data for this report were collected as part of the ongoing research program of the Higher Education Panel (HEP) of the American Council on Education. The Panel was created in 1971 for the purpose of conducting surveys on topics of current policy interest to the higher education community and to government agencies. It is based upon a network of campus representatives at 643 institutions broadly representative of all colleges and universities in the United States. Usually for any given survey, the entire Panel or a subset is used.

For this survey, the eligible population comprised the 1,704 institutions in the nation that awarded at least the baccalaureate. The survey group, which totaled 700 colleges and universities, was composed of three subsets: (1) 531 HEP member institutions; (2) 104 non-Panel institutions in the five Southwestern states,[3] included to assure adequate representation of institutions with above-average enrollments of Hispanic students and surveyed by the National Board on Graduate Education (NBGE); and (3) 65 non-Panel colleges identified as predominantly or historically Black,[4] included to assure adequate representation of institutions with large enrollments of Black students and surveyed by the Institute for Services to Education (ISE). All questionnaires were mailed out in the fall of 1974 (see Appendix A for a copy of the survey instrument). By the cutoff date in mid-February 1975, usable data had been received from 539 (77 percent) of the 700 institutions surveyed. (For a more detailed discussion of institutional response, see Appendix B.)

Institutions in the population were categorized in terms of the variables used in the Panel's stratification design, which is based primarily on type (university, four-year college), control (public, private), and undergraduate enrollment (size categories).

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[3]The five Southwestern states are Arizona, California, Colorado, New Mexico, and Texas.

[4]Predominantly Black institutions are defined as those having Black enrollments of at least 50 percent.

For this particular survey, the stratification design was modified to adjust for the oversampling of predominantly Black institutions and of institutions located in the Southwest.

The data from the 539 responding institutions were statistically adjusted to represent the national population of more than 1,700 colleges and universities which offer bachelor's degrees. Specifically, each data item was weighted, within each stratification cell, by the ratio of the number of institutions in the eligible population to the number of sample institutions in that cell which responded to the particular survey item. Thus the data displayed in the tables are weighted estimates which apply to the total number of baccalaureate-granting institutions in the United States. (See Appendix C for a more complete discussion of the weighting procedures.)

For various reasons, the reported total of baccalaureates by field did not correspond exactly with the reported total by sex for many respondent institutions. Consequently, the major field data were weighted separately from the sex data; the resulting aggregates differed overall by less than 1 percent. To avoid confusion, however, only one set of estimates--by field--are shown in all tables in the report. Any slight differences in the percentage distribution of minorities for the total by sex and for the total by field result from the separate weighting.

It should be noted that the weighted national estimates of baccalaureate production used in the present report are 3.6 percent higher than the counts obtained from the Higher Education General Information Survey (HEGIS): 989,200 compared with 954,400. The HEGIS report and its count of baccalaureates are based on data provided by the entire population of institutions, while the HEP report is based on responses from 539 institutions statistically weighted to approximate the entire population of institutions. (See Appendix D for a detailed discussion of these differences.)

Appendix E contains an assessment of the quality of the information provided by the responding institutions, including the source of reported data, ratings of certainty, and sources of uncertainty.

Results

About 76,900 bachelor's degrees were awarded to students from the four minority groups covered in the survey: Black Americans, Spanish-surnamed Americans, Asian-Americans, and American Indians (Table 1A). Together they accounted for 7.8 percent of the estimated 989,200 baccalaureates conferred between July 1973 and June 1974.[5] The proportions of the total for each group were:

Minority Group	Percent of Baccalaureates
Black Americans	5.3
Spanish-Surnamed Americans	1.3
Asian-Americans	0.9
American Indians	0.3

Among all graduates who received the baccalaureate in 1973-74, 55 percent were men and 45 percent were women. Among minority baccalaureate-recipients alone, 47 percent were men and 53 percent were women. These proportions differed among minority groups, as shown below:

	Percent of Baccalaureates	
Minority Group	Men	Women
Black Americans	43	57
Spanish-Surnamed Americans	56	44
Asian-Americans	55	45
American Indians	63	37

Women were represented in the greatest proportion among the Black baccalaureate-recipients (57 percent) and in the smallest proportion among the American Indian graduates (37 percent).

[5] Included in this survey are all bachelor's degrees requiring at least four but not more than five years of academic work that were conferred between July 1, 1973 and June 30, 1974; excluded are degrees earned but not yet conferred.

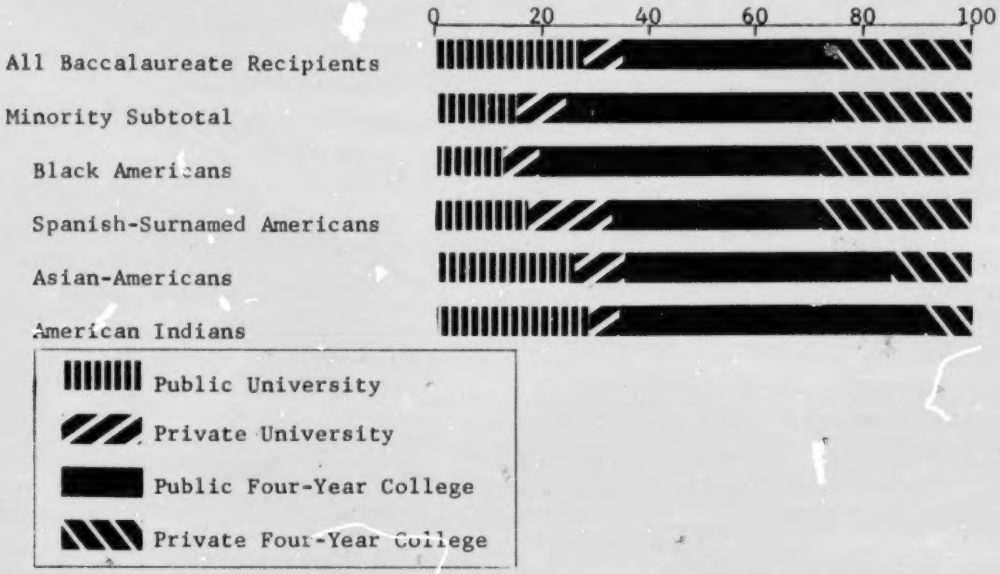
The term "minority" refers to students in the four categories listed who are U.S. citizens or foreign-born students on immigrant visas; excluded are foreign students with temporary or student visas.

Institutional Distribution

The four groups of minority baccalaureate-recipients were distributed differently among the four institutional categories, as follows:

FIGURE 1

Percentage Distribution of Baccalaureate Recipients at Various Types of Institutions, by Minority Group



As Figure 1 shows, relative to the institutional distribution of all baccalaureate-recipients, Black baccalaureates were less likely to have graduated from public universities and somewhat more likely to have graduated from public four-year colleges. Spanish-surnamed recipients were also underrepresented at public universities and overrepresented at private universities. Asian-American and American Indian baccalaureate-recipients were less likely to receive their degrees from private four-year colleges and more likely to receive them from public four-year colleges.

Moreover, the four institutional categories differed considerably in the proportions of each of the four minority groups among their total baccalaureate-recipients. The survey estimates were as follows (summarized from Table 1B):

Type of Institution	Percent Minority			
	Black Americans	Spanish-Surnamed Americans	Asian-Americans	American Indians
All Institutions	5.3	1.3	.9	.3
Public Universities	2.3	.8	.9	.3
Public Four-Year Colleges	6.9	1.2	1.2	.4
Private Universities	5.3	2.9	1.2	.3
Private Four-Year Colleges	6.0	1.4	.6	.1
Predominantly White Institutions	3.0	1.3	1.0	.3
Predominantly Black Institutions	90.2	.2	.2	*

* = Less than .05 percent.

It should be noted that just under half (23,400) of the bachelor's degrees awarded to Blacks were earned at 84 predominantly Black institutions, where Black students accounted for 90 percent of the baccalaureates awarded. In 1,620 predominantly White institutions, 28,600 bachelor's degrees were awarded to Black students, who constituted about 3 percent of all baccalaureate-recipients at those institutions.

Regional Variations

The four major regions of the country differed considerably with respect to the numbers and proportions of each minority group receiving baccalaureates from institutions in each region, as shown in Table 1B and summarized in Figure 2 at the top of the next page.

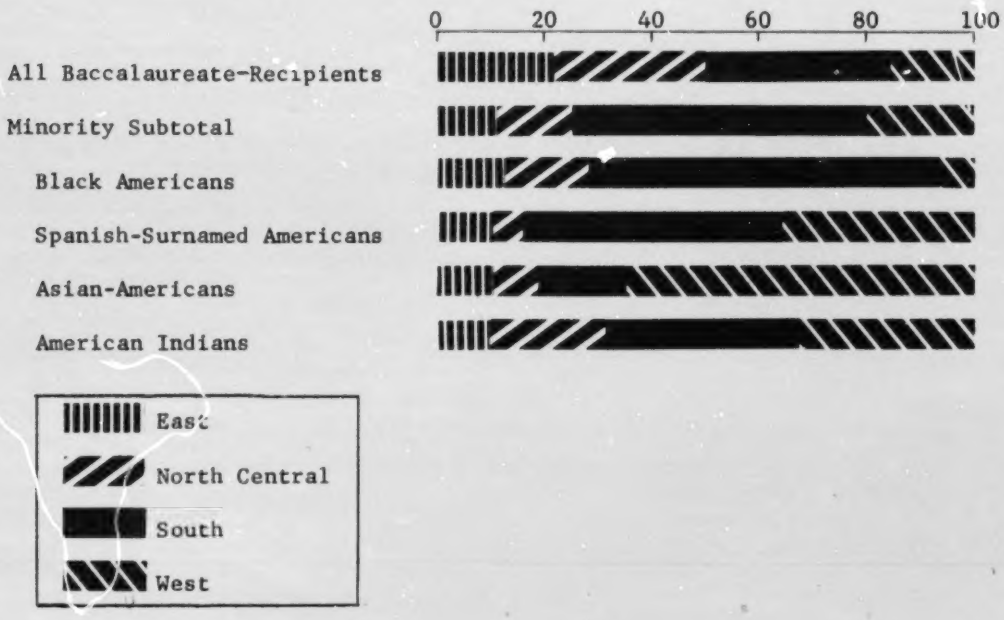
Generally, these profiles reflect the concentration of the four minority groups in the population of each of the four regions. Approximately two-thirds of the Black baccalaureate-recipients earned their degrees from institutions in the South. Institutions in the West and South awarded about four in five of the baccalaureates received by Spanish-surnamed and two in three of those received by American Indian students. About two-thirds of the Asian-American students received their degrees from institutions located in the West.

Sex Distributions

Men constituted 55 percent, and women 45 percent, of all 1973-74 baccalaureate-recipients (Table 2). The majority of Black graduates, however, were women (57 percent), and

FIGURE 2

Percentage Distribution of Baccalaureate-Recipients in Census Regions, by Minority Group



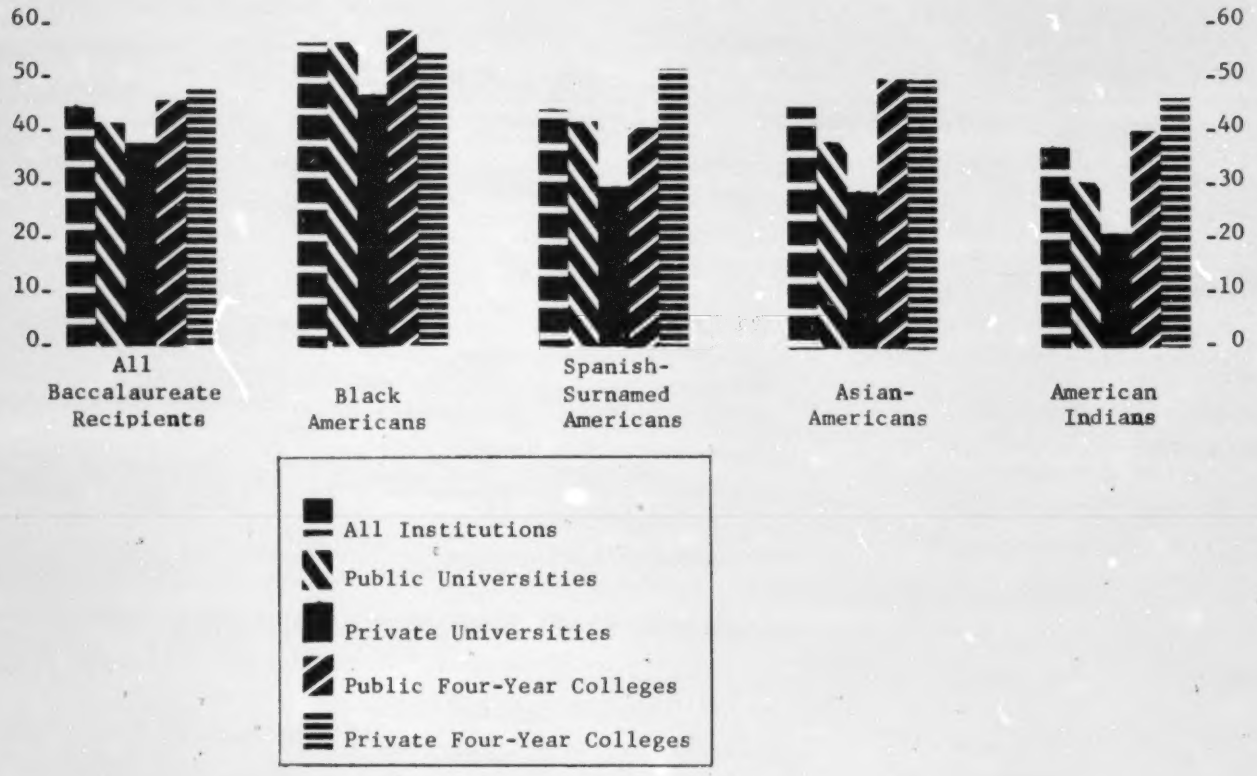
the majority of American Indian graduates were men (63 percent). The proportions of men among both Spanish-surnamed and Asian-American graduates were the same as the figure for all graduates (55 percent).

The proportions of women among baccalaureate-recipients from the four institutional categories differed widely, both among the four minority groups and compared with all baccalaureate-recipients, as shown in Figure 3. On the whole, both minority and nonminority women were less likely to graduate from universities, particularly private universities, where the proportions of women among baccalaureate-recipients ranged from 22 percent for American Indians (compared with 37 percent at all institutions) to 47 percent for Black graduates (compared with 57 percent at all institutions). In contrast, except for American Indians, the proportion of women among minority students graduating from private four-year colleges was somewhat above that for all baccalaureate-recipients.

The same pattern held for the distribution of men and women graduates among the four institutional categories (shown in Table 3). While the overall distribution of women

FIGURE 3

Percentage of Women Among Baccalaureate Recipients at Various Types of Institutions, by Minority Group



was similar to that of men, there were some sharp differences between minority graduates of the same sex. Thus, 62 percent of American Indian women, but only 37 percent of Spanish-surnamed women, received degrees from public four-year colleges; 31 percent of American Indian men, but only 12 percent of Black men, graduated from public universities.

Fields of Study

Each of the four minority groups had its own distinctive pattern with respect to undergraduate major fields. The charts below (abstracted from Table 4A) summarize these patterns, comparing them with the relative distribution of all baccalaureate-recipients among the fields of study.

Fields with Larger-than-Average Proportions of
Minority Baccalaureate-Recipients
(as a % of all baccalaureates awarded to the minority)

	Black Americans	Total Recipients
Education	27%	18%
Social sciences	22%	16%
Social work	3%	1%

	Spanish-Surnamed Americans	Total Recipients
Arts & humanities	20%	14%

	Asian-Americans	Total Recipients
Business & management	18%	14%
Engineering	10%	6%
Biological sciences	10%	5%
Health professions	8%	4%
Mathematics	5%	2%

	American Indians	Total Recipients
Social sciences	18%	16%
Engineering	8%	6%
Health professions	6%	4%

Relative to all baccalaureate-recipients, Black Americans were more highly concentrated in education, social sciences, and social work. Spanish-surnamed Americans had a higher-than-average representation in the arts and humanities, and American Indians in the social sciences, engineering, and health professions. Asian-Americans were more heavily represented in business and management, engineering, biological sciences, health professions, and mathematics.

Minority students were less likely than were all baccalaureate-recipients to have earned their degrees in certain other major fields. Again, the four groups had different patterns, as shown below:

Fields with Smaller-than-Average Proportions of
Minority Baccalaureate-Receipients
(as a % of all baccalaureates awarded to the minority)

	Black Americans	Total Recipients
Arts & humanities	9%	14%
Engineering	2%	6%
Physical sciences	1%	3%

	Spanish-Surnamed Americans	Total Recipients
Health professions	2%	4%
Mathematics	1%	2%
Home economics	1%	2%

	Asian-Americans	Total Recipients
Arts & humanities	11%	14%
Education	7%	18%

	American Indians	Total Recipients
Biological sciences	3%	5%
Mathematics	1%	2%

Black graduates were less likely to have majored in the arts and humanities, engineering, and the physical sciences, while Asian-American students were underrepresented in the arts and humanities and in the field of education. Spanish-surnamed Americans were less likely to specialize in the health professions, mathematics, and home economics, and American Indians in the biological sciences and mathematics.

Black students graduating from predominantly White institutions chose somewhat different major fields from those graduating from predominantly Black institutions (Table 6). At Black colleges, they were more likely to receive their degrees in education (32 percent, compared with 22 percent at White institutions), business and management (16 percent vs. 10 percent), biological sciences (4 percent vs. 3 percent), and mathematics (3 percent vs. 2 percent). In contrast, Black students at predominantly White institutions more often received their degrees in arts and humanities (10 percent, compared with 7 percent at Black colleges), health professions (8 percent vs. 2 percent), psychology (6 percent vs. 3 percent), social work (3 percent compared to 2 percent), and other public affairs and services (2 percent compared with .4 percent).

In general, degree production patterns were highly similar to the enrollment patterns found in an earlier HEP survey of minority students enrolled for graduate degrees at selected Ph.D.-granting institutions.[6] According to that survey of fall 1973 graduate enrollment, Black graduates were more highly concentrated in education, sociology, and the health professions and somewhat less concentrated in the arts and humanities, engineering, and some of the physical and life sciences.[7] Asian-American graduate students tended to major in engineering and in selected fields within the physical and biological sciences, whereas they were less likely than average to major in education.

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[6] El-Khawas and Kinzer, Enrollment of Minority Graduate Students at Ph.D.-Granting Institutions, 1974.

[7] Exact comparisons cannot be made since the field categories differed somewhat in the two surveys.

TABLE 1A.

Baccalaureate-Recipients, by Minority Group and Institutional Type
July 1973-June 1974

Type	Total Baccalaureate-Recipients	Minority Baccalaureate-Recipients				
		Subtotal	Black Americans	Spanish-Surnamed Americans	Asian-Americans	American Indians
		Weighted Numbers				
All Institutions	989,200	76,900	52,100	12,800	9,300	2,800
Public Universities	274,500	11,700	6,300	2,200	2,400	800
Public Four-Year Colleges	392,700	38,100	27,000	4,900	4,600	1,600
Private Universities	73,700	7,100	3,900	2,100	900	200
Private Four-Year Colleges	248,300	20,100	14,800	3,600	1,400	300
Predominantly White Insts.	963,200	53,400	28,600	12,800	9,200	2,800
Predominantly Black Insts.	26,000	23,500	23,400	*	*	*
		Percent Distribution				
All Institutions	100.0	100.0	100.0	100.0	100.0	100.0
Public Universities	27.7	15.2	12.2	17.1	25.7	28.0
Public Four-Year Colleges	39.7	49.5	51.9	38.0	49.8	56.4
Private Universities	7.5	9.2	7.5	16.7	9.5	6.6
Private Four-Year Colleges	25.1	26.1	28.5	28.1	15.1	8.9
Predominantly White Insts.	97.4	69.4	55.0	99.7	99.6	99.9
Predominantly Black Insts.	2.6	30.6	45.0	.3	.4	**

* Fewer than 50 recipients.
** Less than .05 percent.
N.B.: On this and subsequent tables, numbers are rounded to the nearest hundred. Figures may not add up to totals because of weighting and rounding.

TABLE 1B.

Baccalaureate-Recipients, by Minority Group and Selected Institutional Characteristics
July 1973-June 1974

(In Percentages)

Characteristic	Total Baccalaureate-Recipients		Minority Baccalaureate-Recipients				
	Number	Percent	Subtotal	Black Americans	Spanish-Surnamed Americans	Asian-Americans	American Indians
All Institutions	989,200	100.0	7.8	5.3	1.3	.9	.3
Public Institutions	667,200	100.0	7.5	5.0	1.1	1.0	.4
Private Institutions	322,000	100.0	8.4	5.8	1.8	.7	.1
Public Universities	274,500	100.0	4.3	2.3	.8	.9	.3
Public Four-Year Colleges	392,700	100.0	9.7	6.9	1.2	1.2	.4
Private Universities	73,700	100.0	9.6	5.3	2.9	1.2	.3
Private Four-Year Colleges	248,300	100.0	8.1	6.0	1.4	.6	.1
Predominantly White Insts.	963,200	100.0	5.5	3.0	1.3	1.0	.3
Predominantly Black Insts.	26,000	100.0	90.5	90.2	.2	.2	*
East	212,100	100.0	4.2	3.1	.6	.4	.1
North Central	281,600	100.0	3.8	3.0	.3	.3	.2
South	340,400	100.0	12.4	9.9	1.8	.4	.3
(Predominantly White)	(315,600)	(100.0)	(6.3)	(3.6)	(1.9)	(.5)	(.3)
(Predominantly Black)	(24,800)	(100.0)	(89.6)	(89.3)	(.2)	(.2)	(*)
West	155,200	100.0	9.7	2.3	3.0	3.9	.6

* Less than .05 percent.

TABLE 2.

Baccalaureate Recipients, by Sex, Minority Group, and Institutional Type
July 1973-June 1974

(In Percentages)

Sex	Total Baccalaureate-Recipients	Minority Baccalaureate-Recipients				
		Subtotal	Black Americans	Spanish-Surnamed Americans	Asian-Americans	American Indians
			All Institutions			
	(N=989,200)	(N=76,900)	(N=52,100)	(N=12,800)	(N=9,300)	(N=2,800)
Total	100.0	100.0	100.0	100.0	100.0	100.0
Women	44.7	52.7	56.7	44.2	45.4	37.4
Men	55.3	47.3	43.3	55.8	54.6	62.6
			Public Universities			
	(N=274,500)	(N=11,700)	(N=6,300)	(N=2,200)	(N=2,400)	(N=800)
Total	100.0	100.0	100.0	100.0	100.0	100.0
Women	42.0	48.5	56.8	41.7	38.3	31.0
Men	58.0	51.5	43.2	58.3	61.7	69.0
			Public Four-Year Colleges			
	(N=392,700)	(N=38,100)	(N=27,000)	(N=4,900)	(N=4,600)	(N=1,600)
Total	100.0	100.0	100.0	100.0	100.0	100.0
Women	46.0	54.8	59.1	41.3	49.7	40.5
Men	54.0	45.2	40.9	58.7	50.3	59.5
			Private Universities			
	(N=73,700)	(N=7,100)	(N=3,900)	(N=2,100)	(N=900)	(N=200)
Total	100.0	100.0	100.0	100.0	100.0	100.0
Women	37.7	42.9	46.9	29.8	28.6	21.5
Men	62.3	57.1	53.1	70.2	71.4	78.5
			Private Four-Year Colleges			
	(N=248,300)	(N=20,100)	(N=14,800)	(N=3,600)	(N=1,400)	(N=300)
Total	100.0	100.0	100.0	100.0	100.0	100.0
Women	47.9	53.8	54.8	51.8	50.0	46.8
Men	52.1	46.2	45.2	48.2	50.0	53.2
			Predominantly White Institutions			
	(N=963,200)	(N=53,400)	(N=28,600)	(N=12,800)	(N=9,200)	(N=2,800)
Total	100.0	100.0	100.0	100.0	100.0	100.0
Women	44.4	50.3	55.4	44.1	45.3	37.5
Men	55.6	49.7	44.6	55.9	54.7	62.5
			Predominantly Black Institutions			
	(N=26,000)	(N=23,500)	(N=23,400)	*	*	*
Total	100.0	100.0	100.0			
Women	56.8	58.3	58.4			
Men	43.2	41.7	41.6			

* Fewer than 50 recipients.

TABLE 3.

Baccalaureate-Recipients, by Institutional Type, Minority Group and Sex
July 1973-June 1974

(In Percentages)

Institutional Type	Total Baccalaureate-Recipients	Minority Baccalaureate-Recipients				
		Subtotal	Black Americans	Spanish-Surnamed Americans	Asian-Americans	American Indians
			Total			
	(N=989,200)	(N=76,900)	(N=52,100)	(N=12,800)	(N=9,300)	(N=2,800)
All Institutions	100.0	100.0	100.0	100.0	100.0	100.0
Public Universities	27.7	15.2	12.2	17.1	25.7	28.0
Public Four-Year Colleges	39.7	49.5	51.9	38.0	49.8	56.4
Private Universities	7.5	9.2	7.5	16.7	9.5	6.6
Private Four-Year Colleges	25.1	26.1	28.5	28.1	15.1	8.9
			Women			
	(N=442,200)	(N=40,500)	(N=29,500)	(N=5,700)	(N=4,200)	(N=1,000)
All Institutions	100.0	100.0	100.0	100.0	100.0	100.0
Public Universities	26.1	14.0	12.2	16.9	21.9	23.4
Public Four-Year Colleges	40.8	51.7	54.1	37.0	55.2	61.6
Private Universities	6.3	7.5	6.2	11.7	6.1	3.8
Private Four-Year Colleges	26.9	26.7	27.5	34.3	16.8	11.2
			Men			
	(N=547,000)	(N=36,400)	(N=22,500)	(N=7,100)	(N=5,100)	(N=1,800)
All Institutions	100.0	100.0	100.0	100.0	100.0	100.0
Public Universities	29.1	16.5	12.1	17.4	28.7	30.8
Public Four-Year Colleges	38.8	47.1	49.0	38.8	45.4	53.4
Private Universities	8.4	11.1	9.1	20.3	12.3	8.2
Private Four-Year Colleges	23.7	24.4	29.7	23.5	13.7	7.6

TABLE 4A.

Major Field of Baccalaureate-Recipients, by Minority Group:
All Institutions
July 1973-June 1974

(In Percentages)

Major Field	Total Baccalaureate-Recipients	Minority Baccalaureate-Recipients				
		Subtotal	Black Americans	Spanish-Surnamed Americans	Asian-Americans	American Indians
	(N=989,200)	(N=76,900)	(N=52,100)	(N=12,800)	(N=9,300)	(N=2,800)
Total	100.0	100.0	100.0	100.0	100.0	100.0
Arts and Humanities	14.1	11.0	8.8	19.8	11.0	12.4
Biological Sciences	5.4	4.6	3.7	4.4	10.0	2.8
Business and Management	13.5	13.2	12.6	12.3	17.5	14.2
Education	18.0	22.3	26.9	15.9	6.7	17.1
Engineering	6.3	4.1	2.1	7.0	10.2	7.8
Mathematics	2.5	2.3	2.2	1.4	4.6	1.2
Physical Sciences	2.7	1.8	1.4	2.6	3.1	2.0
Psychology	5.3	5.0	4.8	5.6	5.7	5.0
Social Sciences	16.1	20.1	21.9	17.0	14.2	18.4
All Other Fields (Total)	16.0	16.3	15.7	13.9	21.1	22.9
Architecture and Environmental Design	.8	.7	.3	1.5	1.5	1.0
Health Professions	4.3	5.2	5.3	2.5	8.1	5.7
Home Economics	1.8	1.3	1.4	.8	1.4	1.7
Social Work	1.0	2.3	2.6	1.8	1.9	1.8
Other Public Affairs and Services	1.3	1.2	1.2	1.1	.9	2.0
Other Fields Not Included Above	6.8	5.6	5.0	6.1	7.2	10.7

TABLE 4B.

Minority Group of Baccalaureate-Recipients, by Major Field:
All Institutions
July 1973-June 1974

(In Percentages)

Major Field	Total Baccalaureate-Recipients	Minority Baccalaureate-Recipients				
		Subtotal	Black Americans	Spanish-Surnamed Americans	Asian-Americans	American Indians
Total	100.0	7.8	5.3	1.3	.9	.3
Arts and Humanities	100.0	6.1	3.3	1.8	.7	.2
Biological Sciences	100.0	6.6	3.6	1.1	1.7	.1
Business and Management	100.0	7.6	4.9	1.2	1.2	.3
Education	100.0	9.6	7.9	1.1	.3	.3
Engineering	100.0	5.1	1.8	1.4	1.5	.4
Mathematics	100.0	7.2	4.6	.7	1.7	.1
Physical Sciences	100.0	5.3	2.7	1.3	1.1	.2
Psychology	100.0	7.4	4.8	1.4	1.0	.3
Social Sciences	100.0	9.7	7.2	1.4	.8	.3
All Other Fields (Total)	100.0	7.9	5.2	1.1	1.2	.4
Architecture and Environmental Design	100.0	6.1	1.7	2.3	1.7	.3
Health Professions	100.0	9.3	6.4	.8	1.8	.4
Home Economics	100.0	5.8	4.2	.6	.7	.3
Social Work	100.0	18.2	13.5	2.4	1.8	.5
Other Public Affairs and Services	100.0	7.0	4.8	1.1	.6	.4
Other Fields Not Included Above	100.0	6.5	3.9	1.2	1.0	.5

TABLE 5A.

Major Field of Baccalaureate-Recipients, by Minority Group:
Public Institutions
July 1973-June 1974

(In Percentages)

Major Field	Total Baccalaureate-Recipients	Minority Baccalaureate-Recipients				
		Subtotal	Black Americans	Spanish-Surnamed Americans	Asian-Americans	American Indians
	(N=667,200)	(N=49,800)	(N=33,400)	(N=7,100)	(N=7,000)	(N=2,400)
Total	100.0	100.0	100.0	100.0	100.0	100.0
Arts and Humanities	11.0	8.2	6.3	14.5	10.4	10.5
Biological Sciences	4.6	3.7	2.6	3.9	9.3	2.7
Business and Management	14.7	13.6	13.1	11.1	18.3	14.3
Education	21.2	27.0	32.1	22.0	7.1	17.6
Engineering	7.2	4.3	2.4	6.6	9.5	9.1
Mathematics	2.2	2.1	1.8	1.3	4.6	1.2
Physical Sciences	2.2	1.2	.9	1.3	2.1	2.0
Psychology	4.5	4.2	3.6	4.4	6.4	4.8
Social Sciences	13.7	17.5	18.4	15.9	14.3	18.3
All Other Fields (Total)	18.4	19.3	18.2	18.9	23.6	24.1
Architecture and Environmental Design	1.1	.6	.2	1.2	1.7	1.1
Health Professions	4.3	6.4	6.4	3.6	8.7	6.6
Home Economics	2.3	1.8	1.9	1.4	1.8	1.9
Social Work	1.1	3.0	3.3	2.4	2.4	1.7
Other Public Affairs and Services	1.8	1.6	1.6	1.8	1.2	2.4
Other Fields Not Included Above	7.8	6.0	4.8	8.5	7.8	10.3

TABLE 5B.

Major Field of Baccalaureate-Recipients, by Minority Group:
Private Institutions
July 1973-June 1974

(In Percentages)

Major Field	Total Baccalaureate-Recipients	Minority Baccalaureate-Recipients				
		Subtotal	Black Americans	Spanish-Surnamed Americans	Asian-Americans	American Indians
	(N=322,000)	(N=27,200)	(N=18,700)	(N=5,700)	(N=2,300)	(N=400)
Total	100.0	100.0	100.0	100.0	100.0	100.0
Arts and Humanities	20.7	16.2	13.3	26.2	13.1	23.2
Biological Sciences	7.0	6.2	5.8	5.1	12.3	3.4
Business and Management	10.9	12.5	11.8	13.8	15.2	13.3
Education	11.2	13.6	16.2	8.4	5.3	14.4
Engineering	4.5	3.8	1.7	7.6	12.5	.7
Mathematics	3.0	2.7	2.9	1.5	4.6	.9
Physical Sciences	3.7	2.9	2.1	4.3	6.3	1.8
Psychology	7.0	6.6	6.9	7.0	3.6	6.0
Social Sciences	20.9	24.8	28.2	18.4	14.0	18.8
All Other Fields (Total)	11.1	10.7	11.2	7.9	13.1	16.5
Architecture and Environmental Design	.4	.8	.5	1.9	1.0	0
Health Professions	4.4	3.0	3.2	1.3	6.2	.9
Home Economics	.6	.5	.6	.1	.1	.7
Social Work	.7	1.1	1.2	1.1	.4	2.1
Other Public Affairs and Services	.5	.5	.7	.3	.1	0
Other Fields Not Included Above	4.5	4.9	5.2	3.1	5.2	13.1

TABLE 6.

Comparison of Black Baccalaureate-Recipients With the Total,
by Major Field and Type of Institution
July 1973-June 1974

(In Percentages)

Major Field	All Institutions		Predominantly Black Institutions		Predominantly White Institutions	
	Total Baccalaureate-Recipients	Black Baccalaureate-Recipients	Total Baccalaureate-Recipients	Black Baccalaureate-Recipients	Total Baccalaureate-Recipients	Black Baccalaureate-Recipients
	(N=989,200)	(N=52,100)	(N=26,000)	(N=23,400)	(N=963,200)	(N=28,600)
Total	100.0	100.0	100.0	100.0	100.0	100.0
Arts and Humanities	14.1	8.8	7.2	6.9	14.3	10.4
Biological Sciences	5.4	3.7	4.3	4.5	5.4	3.1
Business & Management	13.5	12.6	17.2	16.2	13.4	9.7
Education	18.0	26.9	30.8	32.3	17.6	22.5
Engineering	6.3	2.1	2.1	1.7	6.4	2.4
Mathematics	2.5	2.2	2.6	2.7	2.5	1.8
Physical Sciences	2.7	1.4	1.6	1.5	2.7	1.2
Psychology	5.3	4.8	3.0	3.1	5.3	6.2
Social Sciences	16.1	21.9	20.6	21.2	15.9	22.5
All Other Fields (Total)	16.0	15.7	10.5	10.0	16.2	20.3
Architecture and Environmental Design	.8	.3	.2	.2	.9	.3
Health Professions	4.3	5.3	2.5	2.1	4.4	7.9
Home Economics	1.8	1.4	1.8	1.7	1.8	1.2
Social Work	1.0	2.6	1.5	1.7	1.0	3.3
Other Public Affairs and Services	1.3	1.2	.4	.4	1.4	1.9
Other Fields Not Included Above	6.8	5.0	4.0	3.9	6.8	5.8

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Appendixes

A. Survey Instrument

B. Response to the Survey

C. Weighting Procedures

D. A Comparison with HEGIS Data

E. Information Sources: An Assessment of Data Quality

Appendix A

Survey Instrument

AMERICAN COUNCIL ON EDUCATION
ONE DUPONT CIRCLE
WASHINGTON, D. C. 20036

HIGHER EDUCATION PANEL

October 11, 1974

Dear Higher Education Panel Representative:

Enclosed is the twenty-fourth survey of the Higher Education Panel, Bachelor's Degrees Conferred to Minority Students, 1973-74. This survey is being conducted by the American Council on Education in cooperation with the Institute for the Study of Educational Policy, Howard University, and the National Board on Graduate Education. The purpose is to obtain information on minority representation of U.S. Nationals receiving baccalaureate degrees within particular fields of study, an area for which there are no national data available. The survey should contribute greatly to our knowledge of the success of minority students in completing undergraduate education; moreover, it will provide important information about the potential availability of minority men and women for graduate and professional school training. The findings should also be helpful to individual institutions in their own affirmative action programs.

We realize that not all institutions are able to provide complete data as requested at this time. However, we would appreciate as much information as possible. Data for the ten broad field categories are the first priority in this survey. Should your institution record this type of information in more detailed discipline classifications, we would encourage you to send us such information in addition to breakdowns for the fields specified.

We will appreciate the return of the questionnaire by November 1. If you will need more time to respond, please call or write to us by November 1 with an estimate of the time you need. As with all HEP reports, the data you provide will be used in summary fashion only and will not be identified with your institution. We shall send you a copy of the report on this survey as soon as it is completed.

Thank you for your cooperation. A self-addressed, stamped envelope is enclosed for your convenience in returning the form. If you have any questions or problems, please call collect at (202) 833-4757.

Sincerely,

Elaine H. El-Khawas

Elaine H. El-Khawas
Director

Enclosures
EHE:gw

AMERICAN COUNCIL ON EDUCATION
Higher Education Panel Survey Number 24
Bachelor's Degrees[1] Conferred to Minority Students[2]
July 1, 1973 - June 30, 1974

Major Field	Total Bachelor's Degrees Conferred[3]	Bachelor's Degrees Conferred to: Black Americans	Spanish-Surnamed Americans[4]	Asian Americans	American Indians
1. Arts & Humanities					
2. Biological Sciences					
3. Business & Management					
4. Education					
5. Engineering					
6. Mathematics					
7. Physical Sciences					
8. Psychology					
9. Social Sciences					
10. All Other Fields, Total (a-f)					
a. Architecture & Environmental Design					
b. Health Professions					
c. Home Economics					
d. Social Work					
e. Other Public Affairs and Services					
f. Other Fields Not Included Above					
TOTALS (1-10):					
TOTAL BY SEX — FEMALE					
TOTAL BY SEX — MALE					

1. Report all bachelor's degrees requiring at least four, but not more than five years of academic work that were conferred from July 1, 1973 through June 30, 1974. Do Not report degrees earned but not yet conferred.
2. The term "minority" refers to students in the four categories listed who are U.S. citizens or foreign born students on immigrant visas. Do Not Include foreign students with temporary or student visas.
3. Figures in this column should include minority and nonminority students, and both U.S. and foreign nationals.
4. In the Spanish-surnamed category, report persons considered to be Chicanos, Mexican-Americans, Puerto Rican Americans, or of other Latin American or Spanish origin.

SEE OTHER SIDE FOR ADDITIONAL QUESTIONS. CLASSIFICATION GUIDELINES ARE ENCLOSED.

1. Please rate the degree of certainty you feel concerning the type of data you have reported by circling the appropriate number:

Very Uncertain				Very Certain
1	2	3	4	5

Briefly describe any sources of uncertainty. Of particular concern are possible biases derived from lack of ethnic and racial identification for figures reported by specific disciplines.

2. Please indicate the source or manner by which you obtained the figures:

_____ Departmental Records or Counts

_____ Students Designation on Registration Records

_____ Other (Please Specify): _____

_____

3. Do you collect attrition data by race and sex for undergraduate students?

_____ Yes

_____ No

_____ No, but plan to in the near future

If yes, please briefly describe the method used to collect the data, and indicate the office responsible:

Thank you for your cooperation.
Please return this form by November 1, 1974

TO HIGHER EDUCATION PANEL
AMERICAN COUNCIL ON EDUCATION
ONE DUPONT CIRCLE
WASHINGTON, D.C. 20036

Person completing form _____
Office _____
Phone _____

GUIDELINES FOR DISCIPLINE CLASSIFICATIONS

The fields of study on the questionnaire correspond to the taxonomy used by the HEGIS annual survey of earned degrees conferred, except that HEGIS categories have been combined for Arts and Humanities and All Other Fields, and Social Work has been listed as a separate category rather than being included with Public Affairs and Services.

(1) Arts and Humanities
Includes:
Fine and Applied Arts
Foreign Languages
Letters (English, Literature)
Theology

(2) Biological Sciences
Includes:
Botany
Zoology
Physiology
Pathology
Pharmacology
Anatomy
Biochemistry
Biophysics
Ecology
Entomology
etc.

(3) Business and Management
Includes:
Accounting
Banking and Finance
Transportation and Public Utilities
Real Estate
Labor and Industrial Relations
Business Economics
Insurance
Secretarial Studies

(4) Education
Includes:
General Education
Special Education
Educational Administration
Educational History and Philosophy
Educational Psychology
etc.

(5) Engineering
Includes:
Agricultural Engineering
Chemical Engineering
Industrial and Management Engineering
Engineering Physics
etc.

(6) Mathematics
Includes:
Mathematics, General
Statistics
Applied Mathematics
etc.

(7) Physical Sciences
Includes:
Physics
Chemistry
Astronomy
Atmospheric Sciences
Geology
Paleontology
Oceanography
Metallurgy
etc.

(8) Psychology
Includes:
Psychology for Counseling
Social Psychology
Psychometrics
Statistics in Psychology
etc.

(9) Social Sciences
Includes:
Anthropology
Archaeology
Economics
History
Geography
Political Science
Sociology
Criminology
International Relations
Afro-American Studies
Mexican-American Cultural Studies
Urban Studies
Demography
etc.

(10) All Other Fields
Includes:

(a) Architecture & Environmental Design
Interior Design
Urban Architecture
City, Community, and Regional Planning
etc.

(b) Health Professions
Hospital and Health Care Administration
Nursing
Occupational Therapy
Pharmacy
Optometry
Public Health
Medical Laboratory Techniques
Dental Technologies
Radiologic Technologies
Clinical Social Work
etc.

(c) Home Economics
Home Decoration
Clothing and Textiles
Family Relations and Child Development
Institutional Management
Foods and Nutrition
etc.

(d) Social Work

(e) Other Public Affairs and Services
Community Services
Public Administration
Parks and Recreational Management
Law Enforcement
etc.
EXCLUDES: Social Work

(f) Other Fields Not Included Above
Area Studies
Communications
Computer and Informational Services
Library Sciences
Interdisciplinary Studies
Agriculture and Natural Resources
Military Studies
Other Miscellaneous, Unknown, or Unspecified Areas of Study

Appendix B

Response to the Survey

About 70 percent of the 700 surveyed institutions were able to provide data about the sex distribution or the fields of study, or both, of their 1973-74 minority baccalaureate-recipients. Of these, 87 percent provided essentially all the requested information, 6 percent failed to provide the information on sex distribution, and another 6 percent failed to provide some other component of the information requested. In addition, 53 institutions were able to provide the requested information on all their baccalaureate-recipients, but not on their minority graduates. These institutions were considered nonrespondents; the overall information they did provide, however, was used in developing the weighting system for national estimates (described in Appendix C).

The response patterns of the 700 surveyed institutions were as follows:

Respondents	Provided all requested information.	424
	Did not provide sex distribution data.	31
	Did not provide information on some minorities or fields of study.	31
	Provided requested information for total baccalaureates but no information about minorities.	53
Nonrespondents	Replied to survey but responses judged unusable due to incompleteness or apparent errors.	16
	Replied that data not available.	84
	Did not respond.	61
Total		700

Table B-1 compares respondents and nonrespondents on several basic characteristics[1] and shows the response rate for each institutional category.

Several substantial differences emerged from these comparisons. Overall, nearly 70

[1] Some of these characteristics are, of course, highly interrelated. Universities, for example, are likely to have larger undergraduate enrollments than four-year colleges. Similarly, universities, by definition, offer degrees beyond the baccalaureate.

Table B-1

Institutional Characteristics of Respondents and Nonrespondents

(In Percentages)

Characteristic	Total Surveyed (N=700)	Respondents (N=486)	Nonrespondents (N=214)	Response Rates
Type				
University	21.0	16.0	32.2	53.1*
Four-Year College	79.0	84.0	67.8	73.8
Control				
Public	37.7	31.9	50.9	58.7*
Private	62.3	68.1	49.1	75.9
Highest Degree Offered				
Bachelor's	35.6	42.2	20.6	82.3**
Higher than Bachelor's, lower than Doctorate	31.1	31.5	30.4	70.2
Doctorate	33.3	26.3	49.1	54.9*
Undergraduate Enrollment (1973-74)				
Less than 1,000	28.9	34.0	17.3	81.7**
1,000 - 4,999	43.7	48.1	33.6	76.5
5,000 - 9,999	14.6	9.5	26.2	45.1*
10,000 or more	12.9	8.4	22.9	45.6*
Census Region				
East	22.2	21.4	24.1	67.1
North Central	22.6	23.7	20.3	72.8
South	34.8	37.2	29.2	74.5
West	20.3	17.7	26.4	60.6*
Setting				
Suburban Fringe	20.6	21.0	19.6	70.8
Central City	46.1	44.0	50.9	66.3
NonSMSA	33.3	35.0	29.4	73.0
Race				
Predominantly Black	12.0	12.8	11.2	72.1
Predominantly White	88.0	87.2	88.8	69.1

* Categories of institutions underrepresented among respondents.
** Categories of institutions overrepresented among respondents.

percent of the 700 surveyed institutions responded with usable data. The categories of institutions underrepresented in the survey (response rates below 60 percent) were: (1) universities (response rate of 53 percent), (2) public institutions (59 percent), (3) Ph.D.-granting institutions (55 percent), and (4) institutions with undergraduate enrollments of 5,000 or more (45 percent). The categories overrepresented (response rates of 80 percent or more) were (1) institutions offering no degree higher than the baccalaureate (82 percent) and (2) institutions with fewer than 1,000 undergraduates (82 percent).

Clearly, these variations in response rates require further analysis to assess the nature and direction of bias in the national estimates of minority baccalaureate production presented in this report.

The higher response rates of small institutions are, perhaps, to be expected in view of the wider variety of means for gathering the requested information (personal knowledge of the students, direct observation, hand tallies of official records, etc.) available to them. Conversely, the larger institutions must depend on the data base built into their (usually computerized) information systems. If that data base included the requested information about minority graduates, the task of extracting it was easy; if not, other means for obtaining the information were few and often too time-consuming to be practical.

The intensive follow-up procedures used in the survey may have contributed to the variations in response rates. Again, the smaller institutions, where the requested information could more easily be obtained by various means, would be most likely to respond to such urging.

Minority Enrollment Response Bias

Whatever the reasons for the differences in response rates, the real issue is: Did these differences distort the national estimates generated by the weighting procedures employed? For example, if an institutional representative was able to provide the requested information but did not because he/she felt that the institution would make a "poor showing," then a bias toward overestimation would be introduced and compounded by the weighting procedure; this form of systematic bias was of considerable concern to the

organizations cooperating in the survey. Similarly, it is possible that colleges and universities with above-average enrollment of, for instance, Black students were more apt to respond (because they knew they would "look good") than were those with below-average Black enrollments; if this were the case, the resulting national estimates of baccalaureates awarded to Blacks would be inflated. It was feared that the publication of such results might encourage complacency on the part of academic institutions and a consequent relaxation of their efforts to attract Black and other minority students to their campuses.

To examine the possibility of such distortions, it was necessary to obtain independent data on minority enrollments at the undergraduate level. The best such data available came from a recent Office for Civil Rights report on a 1972 survey. This source was used to compare respondents and nonrespondents to the present survey.

Table B-2 shows the results, by control of the institution, for the 588 predominantly White institutions surveyed for which Black enrollment data were available. The median percentage of Black undergraduate enrollments was higher at the nonresponding institutions than at those institutions responding to the survey. This difference was greatest among private institutions, where the median was 4.7 percent for nonrespondents and 3.6 percent for respondents. The results for predominantly White institutions by type (universities and four-year colleges) are shown in Table B-3. The 68 nonresponding universities had a substantially higher median percentage of Black undergraduate enrollments than did the 73 responding universities (4.5 percent and 3 percent, respectively). At four-year colleges, the difference between nonrespondents and respondents was in the same direction though smaller (3.6 percent and 3.2 percent, respectively).

Overall, assuming comparable attrition rates, these findings indicate that the weighted national estimates reported here are more likely to underestimate than to overestimate the numbers of Black students receiving bachelor's degrees during the 1973-74 academic year. Thus, the hypothesis that some institutions failed to respond to avoid a "bad showing" is not supported.

Regional Response Bias

Another concern was the possibility of distortions in the survey results due to

Table B-2

Black Undergraduate Enrollments of Respondents and Nonrespondents, by Control: All Predominantly White Institutions

(In Percentages)

Black Undergraduate Enrollment[a]	Respondents[b]			Nonrespondents[b]		
	Total (N=406)	Public (N=122)	Private (N=284)	Total (N=182)	Public (N=94)	Private (N=88)
Less than 3.0%	45.3	49.2	43.7	39.6	45.7	33.0
3.0% - 5.9%	30.3	28.7	31.0	31.3	28.8	34.1
6.0% - 8.9%	17.2	17.3	17.3	17.6	12.8	22.7
9.0% or more	7.2	4.9	8.1	11.5	12.7	10.2
Total	100.0	100.0	100.0	100.0	100.0	100.0
Median Black undergraduate enrollment	3.4	3.1	3.6	3.9	3.3	4.7

[a]From the Office for Civil Rights, Racial and Ethnic Enrollment Data From Institutions of Higher Education Fall 1972, 1974.

[b]Excluded are 18 respondents (8 public, 10 private) and 8 nonrespondents (5 public, 3 private) for which Black enrollment data are not available.

Table B-3

Black Undergraduate Enrollment of Respondents and Nonrespondents, by Type: All Predominantly White Institutions

(In Percentages)

Black Undergraduate Enrollment[a]	Respondents[b]			Nonrespondents[b]		
	Total (N=406)	University (N=73)	Four-Year College (N=333)	Total (N=182)	University (N=68)	Four-Year College (N=114)
Less than 3.0%	45.3	50.7	44.1	39.6	38.2	40.4
3.0% - 5.9%	30.3	28.8	30.6	31.3	30.9	31.6
6.0% - 8.9%	17.2	16.4	17.4	17.6	23.5	14.0
9.0% or more	7.2	4.1	7.8	11.5	7.4	14.0
Total	100.0	100.0	100.0	100.0	100.0	100.0
Median Black undergraduate enrollment	3.4	3.0	3.2	3.9	4.5	3.6

[a]From the Office for Civil Rights, Racial and Ethnic Enrollment Data From Institutions of Higher Education Fall 1972, 1974.

[b]Excluded are 18 respondents (4 universities, 14 four-year colleges) and 8 nonrespondents (1 university, 7 four-year colleges) for which Black enrollment data are not available.

regional differences in response patterns. There was speculation that institutions which have lagged in adopting policies to encourage the enrollment of minority students (notably, those in the South) might not respond to the survey. Thus, our results would overestimate the number of minority graduates.

The data presented in Tables B-4 and B-5 do not support the existence of such a bias: Generally, Southern institutions responded at a rate equal to or higher than those of the other regions (Table B-4). In particular, public institutions and universities in the South had substantially higher response rates than did comparable institutions in other regions.

Of the four regions, it was the Western states whose institutions were least likely to respond; both public institutions and universities had particularly low response rates (40 percent and 44 percent, respectively). This regional difference is perhaps attributable to the intentional oversampling of Southwestern institutions, a procedure which resulted in the inclusion of many nonmembers of the Higher Education Panel who would be less inclined to respond.

Table B-4

Regional Response Rate, by Control and Type:
All Predominantly White Institutions
(In Percentages)

Characteristic	East	North Central	South	West
All Institutions	67.3	73.2	75.5	58.6
Control				
Public	56.3	54.0	71.6	40.0
Private	70.4	82.5	79.0	74.0
Type				
University	41.2	50.0	65.2	43.5
Four-Year	75.2	80.9	79.8	61.8

In each of the regions, the response rates of public institutions were substantially lower than those of private institutions. Moreover, in each region universities consistently had lower response rates than four-year colleges.

In the East and North Central regions, the median percentages of Black students enrolled were somewhat higher among nonrespondent institutions; in the South, respondents

and nonrespondents did not differ; and in the West, the median percentage of Black students for respondents was somewhat higher than that for nonrespondents.

Table B-5 indicates that, in each region, respondent and nonrespondent institutions had similar patterns of difference with respect to Black undergraduate enrollments. In both the public and private sectors, the median percentage of Black students was markedly higher for nonresponding institutions with one clear exception. That exception was private institutions in the West, where the respondents' median for Black enrollments (4.2 percent) was higher than the nonrespondents' (3.5 percent).

Table B-5

Black Undergraduate Enrollment[a] of Respondents and Nonrespondents[b] by Census Region, Control and Type: All Predominantly White Institutions

(Median Percentages)

Census Region	Respondents	Nonrespondents
East, Total	3.0 (N=99)	4.9 (N=48)
Public	2.8 (N=18)	5.9 (N=14)
Private	3.1 (N=81)	4.7 (N=34)
University	4.7 (N=14)	5.4 (N=20)
Four-Year	2.8 (N=85)	3.9 (N=28)
North Central, Total	3.9 (N=121)	4.5 (N=41)
Public	2.7 (N=27)	4.4 (N=23)
Private	4.3 (N=85)	5.9 (N=18)
University	5.3 (N=19)	4.9 (N=19)
Four-Year	3.9 (N=93)	4.7 (N=22)
South, Total	3.2 (N=117)	3.2 (N=38)
Public	3.1 (N=53)	3.5 (N=21)
Private	3.0 (N=64)	3.4 (N=17)
University	2.8 (N=30)	3.9 (N=16)
Four-Year	3.3 (N=87)	2.9 (N=22)
West, Total	3.6 (N=78)	3.1 (N=55)
Public	1.8 (N=24)	3.0 (N=36)
Private	4.2 (N=54)	3.5 (N=19)
University	1.4 (N=10)	1.8 (N=13)
Four-Year	3.6 (N=68)	3.6 (N=42)

[a] From the Office of Civil Rights, Racial and Ethnic Enrollment Data From Institutions of Higher Education, Fall 1972, 1974.

[b] Excluded are 18 respondents and 8 nonrespondents for which Black enrollment data are not available.

Universities and four-year colleges in each region also differed in their relative median Black enrollments. The nonresponding institutions tended to have higher Black student enrollments, with two exceptions: universities in the North Central region and four-year colleges in the South.

Table B-6, which presents Black undergraduate enrollment data for predominantly Black institutions, indicates that respondents had a slightly higher median percentage of Black students than did nonrespondents: 98.8 percent vs. 97.7 percent. While respondents from private institutions had higher median enrollments than did nonrespondents, respondents from public institutions had lower median Black enrollments.[2] (Inasmuch as only one Black institution was classified as a university, and all but five sampled Black institutions were located in the South, no further tabular presentations were deemed appropriate.)

Table B-6

Black Undergraduate Enrollment of Respondents and Nonrespondents, by Control: All Predominantly Black Institutions

(In Percentages)

Percent Black Undergraduate Enrollment[a]	Respondents[b]			Nonrespondents		
	Total (N=61)	Public (N=25)	Private (N=36)	Total (N=23)	Public (N=10)	Private (N=13)
Total	100.0	100.0	100.0	100.0	100.0	100.0
Less than 80%	6.5	8.0	5.4	8.7	20.0	0
80% - 85%	3.2	8.0	0	8.7	10.0	7.7
86% - 90%	6.5	8.0	5.4	0	0	0
91% - 95%	9.7	8.0	10.8	13.0	10.0	15.4
96% - 100%	74.2	68.0	78.4	69.6	60.0	77.0
96%-97%	(9.7)	(24.0)	(0)	(17.4)	(10.0)	(23.1)
98%-99%	(34.0)	(24.0)	(40.5)	(30.4)	(40.0)	(23.1)
100%	(30.6)	(20.0)	(37.8)	(21.7)	(10.0)	(30.8)
Median Black undergraduate enrollment	98.8	95.7	99.1	97.7	97.6	97.7

[a] From Office for Civil Rights, Racial and Ethnic Enrollment Data From Institutions of Higher Education, Fall 1972, 1974.

[b] Of the 67 Black institutions that responded, only 61 provided baccalaureate data by minority group and consequently were included in these analyses.

Comparability of Responding and Nonresponding Black Institutions

Are the predominantly Black colleges which responded to the survey basically different from those which did not respond? This question was raised because the survey data indicated that about 9.8 percent of the baccalaureates from these colleges were awarded to nonblack students, while the overall enrollment of nonblacks had been estimated as less than 3 percent.

To examine this question, the total undergraduate enrollments and the Black undergraduate enrollments[3] of the responding and nonresponding Black colleges, by control, were compared with the following results:

Enrollment Characteristic	Black Public Colleges		Black Private Colleges	
	Respondents (N=25)	Nonrespondents (N=10)	Respondents (N=36)	Nonrespondents (N=13)
Total undergraduate enrollment	66,653	29,107	37,152	10,312
Mean total undergraduate enrollment	2,666	2,911	1,032	793
Mean Black undergraduate enrollment	2,509	2,717	968	767
Percent Black enrollment (weighted mean)	94.1%	93.3%	93.8%	96.7%

This summary indicates that, among the Black public colleges, nonresponding institutions were somewhat larger both in average total enrollment (by 245 students) and in average Black enrollment (by 208 students). These differences are slight. Further, since the average proportions of Blacks enrolled are about the same for respondents and nonrespondents (94 percent and 93 percent, respectively), the survey's weighted estimate of nonblack baccalaureate production was not likely to have been distorted by the observed differences in enrollment.

Among the private colleges, the respondents had higher averages of total and Black enrollments than did the nonrespondents, but a slightly lower average percentage of Blacks (94 percent vs. 97 percent). Yet, because of the small number of nonrespondents

[3] From the Office for Civil Rights, Racial and Ethnic Enrollment Data From Institutions of Higher Education, Fall 1972, 1974.

(13) and the low overall total enrollment (10,300), it seems doubtful that these enrollment differences had any significant effect on the weighted estimates. Further, the higher means and the lower proportions of Black enrollments were attributable almost entirely to the one unusually large responding institution with a comparatively low proportion of Black students. The remaining 35 respondents were similar to the nonrespondents: They had an average total enrollment of 904, an average Black enrollment of 882, and an average percentage of 97.6 Black students. Thus, while the average total enrollments are slightly higher, so are the average proportions of Black student enrollments. In short, the hypothesis of distortions in the counts of Black bachelor's degrees as a result of the response patterns from predominantly Black institutions is not supported.

Appendix C

Weighting Procedures

The three cooperating organizations--the Higher Education Panel, the National Board on Graduate Education, and the Institute for Services to Education--mailed out the survey questionnaire in fall 1974 (see Methods Summary). By the deadline for returning questionnaires (mid-February 1975), 539 (77 percent) of the 700 sampled institutions had provided usable responses.

The data reported by respondents were statistically adjusted to represent the total population of 1,704 baccalaureate-granting colleges and universities in the United States. To develop national estimates, each data item was weighted, within each stratification cell, by the ratio of the number of institutions in the eligible population to the number of sampled institutions in that cell responding to the particular item. Because response rates varied from item to item, weights were computed separately for each item. The resulting cell and item weights were applied to the responses of each institution, and the weighted data were aggregated into the broad institutional categories used in the analysis.

The data presented in this report represent the results of a second stratification design for weighting (Table C-1), which adjusted for the sampling biases that became apparent early in the survey. The first design had been based on institutional type (university, four-year college), control (public, private), location (Southwest, all other), and race (Black, White); the size of institutions (i.e., enrollment) was not taken into consideration. But some of the findings ran counter to expectations, leading to the suspicion that the final counts were too high. As a consequence, a new stratification design was developed whereby undergraduate enrollment was added as a control variable, and the data were reweighted.

The reader is reminded that all data displayed in Tables 1 through 6 represent independently computed population estimates. Because each data element was weighted separately, subtotals generally approximate, but may not add up to, their corresponding totals.

Table C-1

Stratification Design for Weighting HEP Survey No. 24:
Minority Baccalaureate Recipients

Cell	Enrollment[a] Category	Population (N=1704)	Sample (N=700)	Respondents (N=539)
	I. Predominantly White Institutions			
	A. Not Southwest			
	Public Universities	82	75	55
1	<13,300	23	21	16
2	13,300 - 18,999	20	17	12
3	19,000 - 24,000	20	19	16
4	>24,000	19	18	11
	Private Universities	56	48	26
5	<6,000	15	11	9
6	6,000 - 8,899	14	12	8
7	8,900 - 13,100	12	11	6
8	>13,100	15	14	3
	Public Four-Year Colleges	339	84	69
9	<2,800	128	26	22
10	2,800 - 6,099	104	21	20
11	6,100 - 11,500	73	20	16
12	>11,500	34	17	11
	Private Nonsectarian Four-Year Colleges	386	98	77
13	<975	210	27	21
14	975 - 1,399	54	21	19
15	1,400 - 2,300	55	24	20
16	>2,300	67	26	17
	Private Sectarian Four-Year Colleges	534	147	132
17	<800	247	39	35
18	800 - 1,199	120	38	34
19	1,200 - 1,700	74	30	29
20	>1,700	93	40	34
	B. Southwest			
	Public Universities	14	14	9
21	<15,000	6	6	4
22	≥15,000	8	8	5
	Private Universities	9	9	7
23	<6,000	6	6	4
24	≥6,000	3	3	3
	Public Four-Year Colleges	68	56	34
25	<8,000	46	34	23
26	≥8,000	22	22	11
	Private Nonsectarian Four-Year Colleges	67	38	28
27	<700	43	16	12
28	≥700	24	22	16
	Private Sectarian Four-Year Colleges	65	47	35
29	<800	36	21	16
30	≥800	29	26	19
	II. Predominantly Black Institutions			
31	Public	35	35	30
32	Private	49	49	37

[a]Data based on 1973-74 undergraduate enrollment reported in the U.S. Office of Education's Education Directory 1973-74.

Appendix D

A Comparison with HEGIS Data

Just prior to the proposed publication of the present report in summer 1976, the National Center for Education Statistics released summary data on earned degrees conferred in 1973-74. These data were obtained from the Higher Education General Information Survey (HEGIS)[1] which is conducted annually.

The HEGIS report and its count of baccalaureates are based on data furnished by the entire population of institutions. The present HEP report is based on data from 539 institutions only, and its national estimates are derived from a statistical weighting procedure (described in Appendix C). The total number of baccalaureates estimated in the present report exceeds the baccalaureate count reported in the HEGIS publication by 3.6 percent (the totals are 989,200 and 954,400, respectively). One reviewer suggested that the present report be revised to substitute the HEGIS data for the national estimates derived by the weighting procedure, since full coverage of institutions by HEGIS would assure a more accurate representation of total baccalaureates both within the institutional categories discussed in this report (public and private universities and four-year colleges) and among the major fields of study.

This suggestion was considered, but proved to be unworkable. A check of the comparability of the baccalaureate counts provided by the institutions to the HEGIS and HEP surveys for most fields of study did show a high degree of correspondence. Nevertheless there were some differences in the reporting practices in the two surveys which would make questionable the union of the two independently obtained data sets.

It is important, however, for the reader to be aware of the differences between the HEGIS national count of baccalaureates and the weighted estimates derived from the Panel survey and used in the present report. Tables D-1 and D-2 show these differences.

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[1] National Center for Education Statistics. Earned Degrees Conferred 1972-73 and 1973-74 Summary Data (Washington: U.S. Government Printing Office), 1976, NCES-105.

Table D-1

Comparison of Baccalaureate Production Data from the Higher Education General Information Survey (HEGIS) and the Higher Education Panel Survey (HEP), by Sex and Institutional Type

Characteristic	HEGIS						HEP					
	Total		Women		Men		Total		Women		Men	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Total Baccalaureates	954,376	100.0	423,469	44.4	530,907	55.6	989,200	100.0	442,200	44.7	547,000	55.3
Type of Institution												
Public universities	287,026	30.1	121,379	28.7	165,647	31.2	274,500	27.7	115,300	26.1	159,200	29.1
Public four-year colleges	370,429	38.8	174,126	41.1	196,303	37.0	392,700	39.7	180,600	40.8	212,100	38.8
Private universities	81,333	8.5	30,857	7.3	50,476	9.5	73,700	7.5	27,800	6.3	45,900	8.4
Private four-year colleges	215,588	22.6	97,107	22.9	118,481	22.3	248,300	25.1	118,900	26.9	129,400	23.7

Table D-2

Comparison of Baccalaureate Production Data from the Higher Education General Information Survey (HEGIS) and the Higher Education Panel Survey (HEP), by Field and Control of Institution

(In Percentages)

Field	HEGIS			HEP		
	Total (N=954,376)	Public (N=657,455)	Private (N=296,921)	Total (N=989,200)	Public (N= 667,200)	Private (N=322,000)
Total	100.0	68.9	31.1	100.0	67.4	32.6
Arts and humanities	13.5	11.3	18.4	14.1	11.0	20.7
Biological sciences	5.1	4.7	6.0	5.4	4.6	7.0
Business and management	14.0	13.5	15.3	13.5	14.7	10.9
Education	19.6	22.4	13.2	18.0	21.2	11.2
Engineering	5.3	5.5	4.9	6.3	7.2	4.5
Mathematics	2.3	2.2	2.5	2.5	2.2	3.0
Physical sciences	2.2	2.0	2.8	2.7	2.2	3.7
Psychology	5.5	5.0	6.5	5.3	4.5	7.0
Social sciences	15.9	15.0	18.1	16.1	13.7	20.9
All other (total)	16.5	18.4	12.4	16.0	18.4	11.1
Architecture and environmental design	.8	.9	.6	.8	1.1	.4
Health professions	4.4	4.5	4.1	4.3	4.3	4.4
Home economics	1.6	2.0	.9	1.8	2.3	.6
Social work	2.6	3.1	1.5	1.0	1.1	.7
Other public affairs and services				1.3	1.8	.5
Other	7.1	8.0	5.2	6.8	7.8	4.5

Differences by Control and Type of Institution

As shown in Table D-1, the overall national estimate resulting from the weighting procedures used in the HEP survey was 3.6 percent higher than the baccalaureate count reported by the respondents to the HEGIS survey. The differences were considerably smaller for public institutions than for private institutions (1.5 percent and 8.4 percent, respectively). Further, for universities the baccalaureate count from the HEGIS survey is higher than the HEP estimate by 5.8 percent, while among the four-year colleges the weighted national estimate from the HEP survey is higher than the HEGIS count by 9.4 percent.

Differences in Distribution by Sex

The survey differences in the baccalaureates awarded to women and to men are similar to the differences in total baccalaureate count--HEP estimates are somewhat higher than the HEGIS counts, by 4.4 percent for women and by 3.0 percent for men (Table D-1). In the counts within universities, however, HEGIS is higher for both women and men (by 6.4 percent and 5.4 percent, respectively), and within the four-year colleges the estimates from the HEP survey are substantially higher for both women and men (by 10.4 percent and 8.5 percent, respectively).

Differences in Distribution by Major Field

Overall, when the HEGIS and HEP survey baccalaureate counts and estimates are distributed by major field, as shown in Table D-2, the differences on a percentage basis are well dispersed--that is, are not concentrated in particular fields. The percentage differences between the surveys are less than half of one percentage point in the biological sciences, mathematics, physical sciences, psychology, social sciences, architecture and environmental design, health professions, home economics, social work and other public affairs and services.

By field the largest differences in the percentage distribution are variations of at least one but less than two percentage points in education (1.6 percent), and in engineering (1.0 percent).

Appendix E

Information Sources: An Assessment of Their Quality

To help in assessing the quality of the information provided, the survey form asked respondents to specify the source of the information on minority baccalaureates and to indicate, on a five-point scale, their degree of certainty about the data reported.

Sources of Information

As Table E-1 shows, two-fifths (40 percent) of the responding institutions relied upon departmental or other institutional records, one-third (32 percent) on the self-designations given by students during registration, 12 percent on observation or other informal counting methods, and 13 percent on a combination of methods. Different categories of institutions drew on different sources of information: Private four-year colleges relied most heavily on departmental and other institutional records, whereas public four-year colleges and public and private universities depended mainly on the self-designations of students. Observation and other informal counting methods were used chiefly by colleges where the small size of the graduating class made such an approach feasible.

Table E-1

Source of Reported Data, by Institutional Type

(In Percentages)

Source	Total Respondents (N=465)	Public		Private	
		University (N=47)	Four-Year College (N=100)	University (N=29)	Four-Year College (N=289)
Total	100.0	100.0	100.0	100.0	100.0
Department Records	23.4	17.0	19.0	13.8	27.0
Student Designations	32.5	55.3	41.0	48.3	24.2
Other Institutional Records	16.1	8.5	18.0	10.3	17.3
Other Campus Reports	3.0	6.4	1.0	6.9	2.8
Observation	12.0	0	15.0	0	14.2
Combinations of Above	12.9	12.8	6.0	20.7	14.5

Ratings of Certainty

Each institutional respondent was also asked to rate his/her certainty about the data reported on a five-point scale ranging from *Very Uncertain* (1) to *Very Certain* (5). Over half (55 percent) felt very certain (level 5), and an additional 30 percent indicated the next level of certainty (4) (Table E-2). Only 6 percent checked on the "uncertain" side of the scale (1 or 2).

Table E-2

Degree of Certainty of Reported Data, by Undergraduate Enrollment

(In Percentages)

Degree of Certainty	Total Respondents (N=448)	Undergraduate Enrollment		
		Less than 1,000 (N=151)	1,000-4,999 (N=213)	5,000 and more (N=84)
Total	100.0	100.0	100.0	100.0
Very Certain (5)	54.9	72.2	56.8	19.0
(4)	29.7	22.5	28.6	45.2
(3)	9.4	3.3	8.5	22.6
(2)	2.7	0.0	1.9	9.5
Very Uncertain (1)	3.3	2.0	4.2	3.6

As Table E-2 shows, however, the degree of certainty was strongly related to enrollment size. Almost three in four of the smaller colleges (undergraduate enrollments of less than 1,000), but only one-fifth of the larger institutions (enrollments of 5,000 or more), were very certain about their data. Enrollment size was related not only to certainty about minority baccalaureate information but also, apparently, to the ability to provide it. (For further discussion of this point, see Appendix B.)

Private institutions and four-year colleges tended to be much more confident about the information they supplied than were public institutions and universities (Table E-3). The universities were particularly cautious: Only 16 percent ascribed high certainty to their data, although half of the 73 responding institutions indicated the next highest level of certainty.

Table E-3

Degree of Certainty of Reported Data,
by Control and Type

(In Percentages)

Degree of Certainty		Control		Type	
		Public (N=143)	Private (N=305)	University (N=73)	Four-Year College (N=375)
Total		100.0	100.0	100.0	100.0
Very Certain	(5)	39.2	62.3	16.4	62.4
	(4)	35.0	27.2	50.7	25.6
	(3)	14.7	6.9	21.9	6.9
	(2)	4.9	1.6	6.8	1.9
Very Uncertain	(1)	6.3	2.0	4.1	3.2

Sources of Uncertainty

One open-ended item on the survey form asked respondents to describe the reasons for their uncertainty about the information they provided. Of the 117 respondents to this item, about one-third believed that their reliance upon voluntary student self-designations of minority status resulted in some underreporting (Table E-4). Nearly one-fifth (19 percent) cited the necessity of making arbitrary decisions to produce the requested minority information. Sixteen percent reported that lack of information about the racial/ethnic status of a portion of their students also produced an undercount of minority graduates, and another 16 percent cited lack of information about a specific minority group as the basis of their uncertainty.

Universities and public institutions were more likely to attribute their uncertainty to reliance on student self-designations and to lack of racial/ethnic information on some students, whereas private institutions, and particularly four-year colleges, more frequently cited lack of information about a specific minority group.

Table E-4

Source of Uncertainty About Reported Data,
by Control and Type

(In Percentages)

Source	Total Respondents (N=117)	Control		Type	
		Public (N=51)	Private (N=66)	University (N=42)	Four-Year College (N=75)
Total	100.0	100.0	100.0	100.0	100.0
Data based on voluntary student designation	32.5	39.2	27.3	42.9	26.7
No information on some students	16.2	19.6	13.6	21.4	13.3
Observation and other informal counting methods	3.4	3.9	3.0	2.4	4.0
No information on some minority students	16.2	11.8	19.7	7.1	21.3
Not able to identify foreign students	2.6	2.0	3.0	4.8	1.3
Spanish-surname not reliable indicator	2.6	0	4.5	2.4	2.7
Judgmental decisions made in count	18.8	17.6	19.7	19.0	18.7
No information for some fields of study	4.3	2.0	6.1	0	6.7
Other	3.4	3.9	3.0	0	5.3

Other Reports of the Higher Education Panel
American Council on Education

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